CONTENTS OF SUPPLEMENT.

PERSONALS 1
CONSTRUCTION NEWS:
Railways 1
Street and Electric Railways 2
Electric Light and Power 2
Buildings 3
Water-Works 3
Irrigation 3
Sewerage 3
Streets and Roads 3
Miscellaneous Contracts and Supplies 4
Contract Prices 4

(We have to apologize to our readers this week for the presentation of a Construction News supplement of but four pages, instead of the regular eight pages, and the omission of several of its departments. Unexpected delays in our new printing office are the explanation of these omissions as well as of the delay of 24 hours in going to press.—Ed. Eng. News.)

PERSONALS.

Mr. Joseph Eckert, civil engineer, was drowned recently at Union, Mo.

Mr. George Cooper, civil engineer, died at Red Bank, N. J., Dec. 26, at the age of 59.

Mr. J. W. Henderson has resigned his position as Chief Engineer of the Chicago, Rock Island & Texas Ry.

Mr. E. O. Faulkner has been elected Vice-President and General Manager of the Pecos Valley Ry., with headquarters at Eddy, N. M.

Mr. Wm. T. Merrifield, one of the oldest manufacturers of Worcester, Mass., died Dec. 26, at the age of 89. He was at one time a builder and contractor.

Mr. Allen Cook, of Danville, Ill., has resigned his position as Superintendent of Motive Power and Machinery of the Chicago & Eastern Illinois Ry., which position he has held for 20 years.

Mr. W. Percy Bristol has been appointed Superintendent of the Meriden Electric Ry., Meriden, Conn., to succeed Mr. Gray, who has resigned to go to Sault Ste. Marie, Mich.

Prof. Dwight Porter, of Boston, delivered a lecture on "Sewerage" at the Lowell Institute, Boston, Mass., on Dec. 31. On Jan. 13 he will lecture on "Sewage Disposal."

Mr. Jos. Ramsey, Jr., M. Am. Soc. C. E., has been elected Vice-President of the Wabash R. R. Co., to fill the vacancy occasioned by the resignation of Mr. Charles M. Hays.

Mr. Millard Hunsiker, Superintendent of the armor place mill of the Carnegie Steel Co., has returned from Japan, where he has been in the interest of his department for five months.

Mr. A. D. Thompson, City Engineer of Peoria, Ill., has been engaged to design and superintend the construction of a system of water-works for the city of Gillman, Ill.

Mr. Charles F. Parker, Assistant to Mr. George W. Parker, President and General Manager of the St. Louis & Cairo Short Line, has been appointed General manager of the line, with office at St. Louis, Mo.

Mr. H. C. Landon has been appointed Chief Engineer of the Chicago, Peoria & St. Louis Ry., with headquarters at Springfield, Ill. The office of Civil Engineer has been abolished.

Mr. T. A. Lawes, Mechanical Engineer of the Cleveland, Cincinnati, Chicago & St. Louis Ry., at Indianapolis, Ind., has been appointed Superintendent of Motive Power and Machinery of the Chicago & Eastern Illinois Ry., succeeding Mr. Allen Cook, who has resigned.

Mr. Charles A. Wilson, Chief Engineer of the Wheeling & Lake Erie Ry., has resigned to accept the position of Chief Engineer of the Cincinnati, Hamilton & Dayton R. R., with headquarters at Cincinnati, O.

Mr. J. C. Gregory, Division Superintendent of the International & Great Northern Ry., at Palestine, Tex., will be Superintendent of the Galveston, Houston & Henderson Ry., which is to be operated jointly by the International & Great Northern and Missouri, Kansas & Texas railways.

Mr. F. H. Britton, Superintendent of the Montana Division of the Great Northern Ry. at Havre, Mont., has been appointed Superintendent of the Fergus Falls Division, with headquarters at St. Cloud, Minn., succeeding Mr. J. R. Rice, transferred to another position. Mr. Walter Hale has been appointed Superintendent of the Montana Division, succeeding Mr. Britton.

Mr. W. J. Hills, General Superintendent of the Tennessee Midland Ry. and the Paducah, Tennessee & Alabama Ry., will continue in charge of those roads, which are to operated by the Nashville, Chattanooga & St. Louis Ry.

Mr. Nicholas A. Didier, Secretary and General Manager of the Crescent Foundry & Construction Co., died at Allegheny, Pa., last week, at the age of 39. He was a brother of Mr. Paul Didier, M. Am. Soc. C. E., Chief Engineer of the Pittsburg & Western Ry.

Mr. Campbell W. Adams, State Engineer and Surveyor of New York, was presented with a silver table service by the engineers in the state service on Dec. 24, and Mr. Herschell Roberts, Deputy State Engineer and Surveyor, was presented with a silver punch bowl.

Mr. Stephen C. Mason, Assistant Statistician of the Interstate Commerce Commission, has resigned to accept a position with the McConway & Torley Co., of Pittsburg, Pa. He has been connected with the commission for over eight years, and for the last three years has been in direct charge of the Statistical Division and of the compilation of the Statistical Reports published by the commission.

Sir Edward James Harland, head of the great shipbuilding firm of Harland & Wolff, of Belfast, Ireland, died Dec. 23, at the age of 64. He was born at Scarborough in 1831, and was educated at the grammar school there and at the academy at Edinburgh. From 1875 to 1886 he was Chairman of the Belfast Harbor Commissioners, in 1887 High Sheriff of County Down, and Mayor of Belfast in 1885 and 1886. He was made a baronet upon the occasion of the visit of the Prince and Princess of Wales to Belfast in 1885, when he was mayor., and had been member of Parliament for North Belfast since 1889.

Mr. John C. McMynn, M. E., who had charge of the Chicago office of G. W. G. Ferris & Co., has resigned his position with this firm and will devote his entire time to the management of the Mechanical Laboratory of Robert W. Hunt & Co., making a specialty of boiler and engine tests and economizing running expenses of steam and electric plants. He has been sent to Spray, N. C., by Chicago capitalists, to make an examination and complete report on the manufacture of calcium carbide as carried on there, for the production of acetyline gas.

Mr. William H. Gatzmer, of Holmesburg, Pa., near Philadelphia, died last week. He was born in Somerville, N. J., in 1807, and in early life he obtained a situation with Stevens Brothers, of New York, owners of a steamboat line on the North River. On the completion of the Eastern section of the Camden & Amboy Ry., constructed by Stevens Brothers, he was transferred to the steamboat route between South Amboy and New York, and when the road was completed he was given a responsible position in the Philadelphia office of the company. In 1867 he was elected President of the road, which position he retained until the road was leased to the Pennsylvania R. R. Co., in 1872. He was a warm friend of Mr. Asa Packer, and gave the latter considerable assistance by his counsel in the planning and building of the Lehigh Valley R. R., and as early as 1853 was a Director of that company, and subsequently its Consulting Manager.

Mr. Alfred E. Beach, one of the founders and proprietors of the "Scientific American," died of pneumonia on Jan. 1. He was born at Springfield, Mass., in 1826, and was the son of Moses Y. Beach, who established the New York "Sun" and conducted it for many years. Mr. Alfred E. Beach, after acquiring a practical knowledge of newspaper work in his father's office, associated himself with Mr. Orson D. Munn, founded the firm of Munn & Co., and became one of the proprietors of the "Scientific American," for many years the only weekly journal of its class in the United States. Mr. Beach was for nearly 50 years the acive editor of this journal, and he was also himself an inventor of note. In 1832 he invented a typewriting machine, which embodied a number of features of the present instrument; and about 30 years ago he devised a scheme for delivering mail to the central office by underground railtubes, which led to the inventing of the Beach funnelling shield and a plan for underground railways in New York. He founded the Beach Institute, of Savannah, Ga., for the education of freed men, and was widely known for his private charities.

CONSTRUCTION NEWS.

RAILWAYS.

East of Chicago.

HAZELTON LUMBER.—A lumber railway 8 miles long is to be built in Franklin county, Me., to connect Long Pond with the Hazelton timber district, recently purchased by G. A. & C. M. Phillips, of Farmingdale, Me. The rails will be hauled from Lowelltown, on the Canadian Pacific Ry. The line will accommodate a tourist and hunters' traffic.

QUAKERTOWN & EASTON.—Press reports state that the project of building a railway from the North Penn. R. R. Branch of the Philadelphia & Reading R. R. at Quakertown across the upper part of Bucks County to Easton, is beginning to assume definite shape. It is proposed to raise at least $75,000 along the route, and it is said $50,000 of this sum has already been subscribed in stock. If the project is successful, the Philadelphia & Reading R. R. will secure a valuable feeder, as it will open up a rich section of the country, and touch a number of flourishing little towns now many miles distant from a railway. As now projected the new line will run from Quakertown through Richlandtown, Pleasant Valley and Springtown to Riegelsville, Pa., and will strike the Delaware River a short distance above the last-named place. Thence it will run along the river to Easton. John Jamison, of Allentown, is interested.

CANADIAN PACIFIC.—A survey has been made for a branch from Aroostook Junction to Limestone, Me.

DUQUESNE BRANCH, WEST SIDE BELT.—Incorporated Dec. 17, at Harrisburg, Pa., with a capital stock of $10,000, to build a line 10 miles long, in Allegheny County, from Brighton to Thompson's Run, on the Monongahela River. It wil be a coal road, forming a continuation of the Little Sawmill Run R. R.. President, James D. Callery, of Pittsburg; Directors, John C. Reilly, W. J. Burns, John S. Scully and Wm. D. Evans, of Pittsburg, and Jas W. Scully, of Allegheny.

PENNSYLVANIA.—It is reported that double tracking is in progress between Youngstown and Girard, and will be continued to give a complete double track from Niles, O., to Pittsburg. A long trestle is to be built at Youngstown to reach the Ohio Steel Works.

TYLERDALE.—Incorporated in Pennsylvania, to build a line in Washington County; President, Samuel Hazlett; Directors, George Caldwell, A. S. Sprowls, E. E. Bottenfield, Geo. L. Hayes, Samuel Workman.

PENNSYLVANIA.—A new railway is being surveyed from Milesburg, Pa., through the Center County coal belt, to Clearfield, which will give an outlet to quite a large territory. Ch. Engr., A. V. Hoyt, of Phillipsburg, Pa.

LUMBER.—Kulp, Thomas & Co. are extending their log railway that now runs from Milroy, Pa., into the mountains, on through to Huntingdon and Center Counties, opening a way to get out the timber from there.

BALTIMORE & OHIO.—A line from Georgetown, D. C., to Fairfax, on the Southern Ry., a distance of twelve miles, may be built to afford direct connection between these two great systems. A line 28 miles long is to be built from Parsons to Rowlesburg, W. Va.

BUFFALO & ST. MARY'S.—Grading and tracklaying are in progress from St. Mary's, Pa., to Clermont, 25½ miles, connecting at the latter place with the Western New York & Pennsylvania R. R. Ch. Engr. B. E. Welendorf, St. Mary's, P. A.

PORT JERVIS, MONTICELLO & NEW YORK.—This road is to be extended this spring from Summitville to Kingston, N. Y., about 35 miles, under the charter of the Rondout & Southwestern Ry., and from Monticello to White Lake, 10 miles. Pres. Charles D. Haines.

LEHIGH VALLEY.—The Greenville & Hudson Ry., which is to be the Lehigh Valley terminal line in Jersey City, is to run from Brown Place, where the main branch now turns off toward Newark Bay, to the L. V. R. R. freight station at Grand st. and Pacific ave. It will begin at Brown Place, on a trestle and run northerly over meadow or low land, crossing Communipaw ave. at grade. It is said that plans are being prepared for a complete rearrangement of the terminals in Jersey City. It is rumored that the L. V. R. R. intends to establish an independent terminus and ferry at the foot of Essex st., convert its present freight depot at Grand st. and Pacific ave. into a passenger station, and transfer the passengers thence to the new ferry by means of a railway to run along the Morris Canal. These plans, in their entirety, are not likely to go into effect for some time.

INDIANA CENTRAL.—The County Commissioners of Huntington, Ind., have granted a petition for a special section to vote an appropriation towards the construction of this road. The election will be held Jan. 21.

CHICAGO & NORTHWESTERN.—The company has notified the mayor of Chicago that plans have been completed for the elevation of the tracks for a distance of 8 miles. President, Marvin Hughitt. A new line is to be built from Leland, Ill., to Peoria and Spring Valley.

BOSTON, REVERE BEACH & LYNN.—Melvin O. Adams, Pres., Boston, is quoted as stating in regard to the surveys being made at Revere that the tracks will be raised so as to run above all the streets and ways running to the beach. There will be no extensive elevated structure, simply filling.

CHICAGO, KALAMAZOO & SAGINAW.—This company has filed a mortgage for $225,000 to the Union Trust Co., of Detroit. It covers 44 miles of roadbed, its rolling stock and all appurtenances. The mortgage is the outcome of the building scheme which has been talked of for some time, and is for paying the back indebtedness and for the betterment, further construction, completion and equipment of the road. There is a strong probability of the road being extended from its present northern terminus at Woodbury to Saginaw, Mich. Gen. Man., Jas. H. Dewing, Kalamazoo, Mich.

COAST RY. CO. OF NOVA SCOTIA.—L. H. Wheaton, Ch. Engr., Yarmouth, N. S., writes us as follows: The work of construction is being rapidly pushed on this road. Track will be laid to Belleville from Yarmouth, 14¼ miles, by Dec. 15. All the masonry is completed on this section, and station buildings at Arcadia, Tusket and Belleville. The Salmon River steel bridge, consisting of five spans of 41-ft. plate girders, has been erected. The Tusket River bridge has been delivered at the bridge site, and work of erection commenced. This bridge consists of three spans, of 61-ft. deck plate girders, two spans 103 ft. each, lattice truss. These bridges were built by the Central Bridge & Engineering Co., of Petersborough, Ont. Track between Yarmouth and Salmon River, eight miles, is now well ballasted, and fencing is nearly all completed to Salmon River. Box and platform cars have been received from Rhodes, Curry & Co., of Amherst, N. S., who are also building two passenger and one combination car, to be delivered Jan. 1. It is proposed to open this section of the road—Yarmouth to Belleville—about Jan. 15. The line beyond Belleville has been graded about 15 miles, and it is in-

tended to lay track and complete this portion of the line, 15 miles beyond Belleville, for operation by May 1, next. The entire line to Lockport is about 100 miles, on which the surveys have been completed and right of way secured. This portion will be pushed to completion next season. The Nova Scotia Development Co. is building this road. Its officers are: Pres., John A. Brill, Philadelphia; Treas., George A. Fletcher, Philadelphia. The officers of the Coast Ry. Co. are: Pres., Thomas Robertson; Secy., S. D. Pettit; Ch. Engr., L. E. Wheaton. General offices at Yarmouth, N. S.

OTTAWA, ARNPRIOR & PARRY SOUND.—Geo. A. Mountain, Ch. Engr., Ottawa, Que., writes us as follows concerning the progress made on this road: This season's work commenced at the 142d mile and went to the 162d mile from Ottawa, a distance of 20 miles of excessively heavy work. This total length of 162 miles is now opened for traffic. The Parry Sound Colonization Ry., which is the western section of the O., A. & P. S., starts from Scotia, at the Northern Pacific junction of the Grand Trunk Ry., and runs westerly a distance of 48 miles to Parry Sound. Forty miles of this section has been built during the past three years, and the balance of eight miles will be open for traffic by Jan. 1, 1896. The gap remaining between the present terminus of the O., A. & P. S. and Scotia, the starting point of its western section, is 47 miles. The present intention is that this shall be built next season, thus completing the whole line from Ottawa to Parry Sound. There was also completed during the past year what is known as the Central Counties Ry. (Rockland division), from South Indian, on the line of the Canada & Atlantic Ry., to Rockland, on the Ottawa River, a distance of 17 miles. At Rockland are situated large sawmills and a large amount of lumber traffic is anticipated from them. These roads are under the management of J. R. Booth, Pres.; E. J. C. Chamberlin, Gen. Man., both of Ottawa, Ont.

ST. LAWRENCE & ADIRONDACK.—This is the northern connection of the Adirondack & St. Lawrence R. R., and runs from Malone, N. Y., to Valleyfield, Que., from which latter point it is acquiring a line (by lease and construction) to connect with the Canadian Pacific Ry. at the latter company's bridge at Caughnawaga. This new route will be opened next spring, and will give a shorter line into Montreal than at present. The work now being done on the St. Lawrence & Adirondack was noted in our issue of Oct. 31, and consists in widening embankments, filling trestles, and raising the track with 6 ins. of good gravel ballast, with the view of putting the road in first-class condition for heavy power and fast trains. The work is done by a contractor, and the material is plowed from flat cars. The road will not be double-tracked at present. Dr. W. Seward Webb, of New York city, is president.

Southern.

GLENDENNIN & SPENCER.—A press report from Charleston, W. Va., states that this company has completed 16 miles of road, and is pushing on to Spencer, the county seat of Roane county. The road will be 30 miles in length, and is almost entirely owned by Judge W. J. Lewis, of Charleston, W. Va.

BEVERLY.—Dasher, Williams & Co., of Piedmont, W. Va., have secured the right of way for a railway extending from Beverly southward 12 miles. It is believed that a line will be built from Beverly to Huttonsville this year.

CHESAPEAKE & OHIO.—The city of Richmond, Va., has been asked to pass an ordinance authorizing the construction of a new station and office building and an iron viaduct. The cost will be about $200,000.

SOUTH CAROLINA & AUGUSTA.—Arrangements are being made for the construction of this road from Charlestown, S. C., to Augusta, forming an extension of the Louisville & Nashville R. R. M. H. Smith, of Louisville, Ky., President of the L. & N. R. R., is one of the directors.

Northwest.

DUBUQUE.—C. T. Hancock, of Dubuque, Iowa, writes us in regard to this project, noted last week, that the matter is being discussed and it seems as if success would attend the efforts of those desirous of building the road.

LAKE SUPERIOR & ISHPEMING.—This road is now under construction from Ishpeming to Marquette, 17.8 miles. Winston Bros., of Minneapolis, have the contract and are now at work. The maximum grade, 1.63%; maximum curvature 5°. The road is to be completed by Aug. 1, 1896. Ch. Engr., S. S. Neff, Marquette, Mich.

ROCK ISLAND, MUSCATINE & SOUTHWESTERN.—Incorporated in Illinois, to build a line from Rock Island to Kansas City, crossing the Mississippi at Muscatine. Capital stock, $750,000. The incorporators are Daniel Hayes, of Omaha, Neb.; John C. Kille, Wm. McEntry and J. M. Beardsley, of Rock Island, Ill., J. G. Britton and Ira H. Buffum, of Andalusia, Ia., and Chester Lillibridge, Muscatine, Ia.

DULUTH & NORTH DAKOTA.—Press dispatches from Duluth state that, according to D. W. Hines, president of this projected "Farmers'" railway, the work of cutting the right of way on the portion of the road between Thief River Falls and Deer River, the present terminus of the Duluth & Winnipeg R. R., has been begun, and men are now going in from Dakota to engage in the work and in making ties. The route, with the exception of that part through Red Lake reservation, is practically surveyed. By spring, the right of way ought to be cleared. A force of men is now building log camps every 6 miles along the route for the accommodation of the workmen during the winter. As soon as he has had the grading finished, which he intends to accomplish between seeding and harvest time next summer, with the aid of the farmers and with only the payment of stock, he will bond the road for $5,000 a mile to secure the steel and rolling stock. C. R. Stone, of St. Paul, has made the surveys.

CHICAGO, BURLINGTON & QUINCY.—Surveys have been made for a line from Sheridan, Wyo., to Yellowstone Park, and it is said that this may be the beginning of a line to connect with the Oregon Railway and Navigation Co.'s line. Surveys are now being made for a line conecting the Des Moines & Albia branch with the Indianola branch, so as to give the Kansas City and Omaha trains access to Des Moines.

NORTHERN PACIFIC.—An extension from Leeds to Cando, N. Dak., is projected, to accommodate the grain traffic.

MINNEAPOLIS, ST. PAUL & SAULT STE MARIE.—An extension from Kimball to St. Cloud, Minn., is projected. It is also reported that a new line to Chicago is under consideration, utilizing the Wisconsin & Michigan Ry.

Southwest.

PORT ARTHUR.—A press report from Beaumont, Tex., states as follows: C. H. Figley, local manager of the Port Arthur Land Co., received a despatch from Kansas City Dec. 10 announcing that the contract for constructing a railway from Port Arthur to a connection with the Sabine & East Texas road, had been awarded to L. J. Smith, who built the road from Houston to La Porte. He is now in Kansas City, but will leave for Beaumont in a few days and begin construction of the Port Arthur connection as soon as he arrives. Mr. Figley has also been notified that the Kansas City, Pittsburg & Gulf has purchased 25,000 tons of 60-lb. steel rails to be used in extending the road from Shreveport south to Port Arthur.

ST. LOUIS, BELLEVILLE & SOUTHERN.—A press report states as follows: Judge E. H. Gary, who on Nov. 8 purchased the St. Louis, Belleville & Southern Ry., has secured from the Wiggins Ferry Co., all the property on the river front in East St. Louis, Ill., except the flour mill, which lies between the terminal yards of the St. Louis, Alton & Terre Haute and the Mobile & Ohio roads. This is one of the choicest terminal tracts in East St. Louis. The new yards will cover an area of 25 acres and the consideration paid to the Wiggins' Ferry Co. is $160,000. When Judge Gary purchased the road it was thought that he bought it for the Illinois Central, with which he is connected as counsel. This is positively denied by parties who are in a position to know. Judge Gary admits that he represents a number of Eastern capitalists but who they are and what their intentions may be in investing $600,000 in terminal facilities at East St. Louis, he refuses to disclose. This road is being extended to Chester and surveys are being made that will give switch connection with the L. & N., the Air Line and the Illinois Central.

CAIRO & MEMPHIS.—This line is to be built from New Madrid and Portageville to Hopefield, Ark., and Memphis, crossing the Iron Mountain line at Samos. Capt. Holliday, of Cairo, Ill.; Mr. Alphonse De Lisle, of Portageville, and Mr. Barnes and Mr. Lewis, of New Madrid, are interested.

ARANSAS HARBOR TERMINAL.—Bids will be received by Mr. W. B. Brooks, Jr., 21 South Gay st., Baltimore, Md., for building 7 miles of double track, including a steel drawbridge and 3½ miles of trestle, at Aransas Pass, Tex.

ROCKPORT & NORTHERN.—Bids will be received by Mr. W. B. Brooks, Jr., 21 South Gay st., Baltimore, Md., for constructing the whole or a part of this line, which will extend 145 miles from Rockport, Tex.

WACO & THORNTON.—A railway is to be built from Waco, Tex., to a point near Thornton, to open up the coal fields of Limestone County. Col. R. B. Parrott, of Waco, is interested.

KANSAS CITY, PITTSBURG & GULF.—It is proposed to extend the line into Dallas, Tex., connecting with the new Dallas Terminal Ry., and Mr. Wiley, Ch. Engr., has recently reported on the project. Progress is also being made with the line to the Gulf. From Van Buren, Ark., south to Horatio the roadway is being graded and rails laid as fast as money and men will permit. From Horatio to Black Bayou in Louisiana, the company has acquired the Texas & Fort Smith Ry., which is ready for operation. The gap between Black Bayou and Shreveport is nearly completed. The route from Shreveport south to Lake Charles and Port Arthur has been surveyed, tax elections have been held in the various Louisiana parishes and the grading will soon begin. It is also proposed to build an extension from Port Arthur to Houston, Pres. and Gen. Man., E. T. Martin, Kansas City, Mo.

NEW MEXICAN & WESTERN.—Incorporated Dec. 13 at Santa Fe, N. M., by William D. Cameron, of New York; James J. Shuler, David W. Stevens, Edward H. Smith, and Jeremiah Lehy, of Raton, N. M. The capital stock is $2,500,000. The terminals of the projected railroad are Maxwell City, Colfax County, and the junction of the Rio Grande and Taos rivers near Embudo, the line crossing the Cimarron country and Moreno valley, with branches of 4½ and 6½ miles to Ute Creek and Elizabethtown, making a total of 100 miles. It is supposed to be in the interest of the Chicago, Rock Island & Pacific Ry. The main office is at Maxwell City, N. M.

MISSOURI.—Local capitalists are interested in a project for a line in Oregon and Howell Counties, extending from the St. Louis, Iron Mountain & Southern, at Doniphan to Alton and West Plains.

BALTIMORE & OHIO.—It is said that this road will build a line into St. Joseph, Mo., probably making connection with the Chicago Great Western terminals.

TIMPSON & CARTHAGE.—Mr. T. S. Garrison, of Timpson, ex., states that 8 miles have been completed and will be in operation within a month, and that the line will probably reach Carthage this year.

Rocky Mt. and Pacific.

CALIFORNIA, OREGON & IDAHO.—Surveys for this projected railway were begun at Eureka, Cal., the first of this month.

ELSINORE, POMONA & LOS ANGELES.—Fred. J. Perris, Ch. Engr., of San Bernandino, Cal., writes us that surveys have been made, right of way secured, and construction commenced from Elsinore Station, on the Southern California Ry., for 8½ miles, to reach coal and clay beds on the route of the projected line, which will be 58 miles long. Elsinore, 2 1-4 miles from Elsinore Station, will be reached in about 60 days. Pres. and Gen. Man., K. H. Wade, Los Angeles, Cal.

MINNEAPOLIS, ST. PAUL & ASHLAND.—Work is in progress from Ashland, Wis., south to the Duluth, South Shore & Atlantic Ry., 20 miles. The road is to run from Ashland 125 miles to Taylor Falls, Wis., connecting with the Minneapolis, St. Paul & Sault Ste Marie Ry. Pres. J. H. Cochran, Ashland, Wis.

RIO GRANDE WESTERN.—A contract was awarded at Salina, on Dec. 19, for the grading for an extension of 20 miles south to Richland, Utah. The contractors are E. C. Peterson, M. Rasmussen and Neil Paulsen.

SOUTHERN PACIFIC.—The road is to be [illegible] tracked from San Francisco to San Bruno and [illegible] field.

Foreign.

MEXICO.—Press dispatches state that George E. Detwiler, of Chicago, and Emil B. Barry, have been granted a concession by the Mexican government for a railway along the Pacific coast from Tehuantepec to the Guatemala frontier. They will get about $5,000,000 subsidy—Contracts have been given for $800,000 worth of bridges on the Tehuantenec Ry.—Construction on a new railway, from Puebla to Palizada, on the Pacific coast, it is said, will be commenced in January. The concessionaire is Mr. Luis Garcia Teruel, of Puebla.

NOVA SCOTIA.—A relocation has recently been made over a portion of the route of the proposed Truro & Windsor Ry. A corespondent writes us that plans and estimates covering the entire distance of 56 miles are being prepared. It is expected that construction will be begun with the opening of next season, and a first-class road will be built. The bridges will have steel superstructures on masonry foundations. Two of these bridges will have draw spans of 300 ft. This proposed line will shorten the present railway distance between Truro and Windsor by 22 miles, and form a closing link in the main system of the province. Engr., John S. O'Dwyer, Granby, Que., Canada.

STREET AND ELECTRIC RAILWAYS.

BANGOR, ME.—It is reported that New York and Boston capitalists are interested in a proposed electric railway from Frankfort, 16 miles below Bangor, on the Penobscot River, to this city, and from Bangor to Charleston, in the Kenduskeag Valley, a distance of 25 miles. The line to Frankfort will be through Hampden and Winterport, and from Bangor to Charleston through Levant, Glenburn, Kenduskeag and East Corinth. Gen. Henry L. Mitchell, Bangor, is interested.

TAUNTON, MASS.—Press reports state as follows: The Fall River & Taunton St. Ry. Co. has peditioned for an amendment to its charter, which will extend to July 1, 1900, and which will permit it to build a railway between New Bedford and Taunton. This is the company which tried to get a location between Fall River and Taunton, and which contested the matter of location with the Globe St. Ry. Co., of Fall River, for Somerset and Dighton. Its charter expires next June. Now it is asserted that the company, of which William M. Butler is president, and Rufus A. Soule treasurer, desires to connect Taunton and New Bedford. Abbott P. Smith, Charles E. Cook, E. P. Shaw, of Boston, Maj. Pond, of New Haven, and other street railway men are interested in the enterprise.——A company called the Taunton & Providence St. Ry. Co. has been organized to build a line between here and Providence, R. I., and the road will pass through Rehoboth, Dighton and Seekonk. The line will cost about $20,000 a mile, including all equipment. Capital stock, $300,000; directors, Earl H. Potter and Josiah A. King, Seekonk, Mass.; Fred E. Perkins, Johnston, R. I.; W. B. Miller, Providence, R. I.; George E. Francis and N. A. Walker, Dighton, Mass., and Reuben Bowen, Rehoboth, Mass.

BATAVIA, N. Y.—A. B. Wilgus, Gen. Man. New York Standard Construction Co., Bennett Bldg., New York, writes us concerning the Batavia electric railway that the franchise, all the consents and right of way have been secured. Work will be commenced early in March, and the road will be fully completed by July, 1896. The money has been secured for the construction.

MONROE, MICH.—W. H. Cowles, Pres., Monroe, writes us that surveys have been partly made for the Monroe St. Ry. from this city to Dundee. The franchise in the city has been granted. The capital for the construction has not been secured, but the prospects for the road are good. The date of letting the contracts is uncertain. Capital stock, $50,000. Engr., L. E. Walkins, Room 11, 30 Court St., Boston, Mass.

WAUKEGAN, ILL.—Press reports state as follows: Matters are being pushed in regard to the building of the proposed Chicago & Wisconsin Inland Lake Electric Ry. through the Fox Lake region northward to Delavan Lake and Madison. Preliminary surveys have been made to Wilmot, Wis. From Chicago the Chicago, Milwaukee & St. Paul road is used at Libertyville. From there the new road will start, crossing the Wisconsin Central at Gray's Lake. It will skirt the east shore of Fox Lake, with a station near the Columbia Club, and run north to Channel Lake, Wilmot, Lake Geneva, Delavan Lake and Madison. At Wilmot the road is negotiating for aid, wanting a subscription of $50,000 in bonds, a mile and a half of right of way, 20 acres of ground for yards, and water power from the Fox River dam to run the dynamos. Beyond Wilmot the exact route is not yet made public. The road will be 185 miles long. Capital stock, $10,000,000. A. E. Case, G. D. Green, Frank Boden and S. Marcus Rothschild, of Milwaukee, Wis., are interested.

PORTLAND, ORE.—The Portland St. Ry. is to be sold soon. The road is reported to be heavily mortgaged. It is 31 miles long and is equipped with electricity. Receiver, O. F. Paxton.

SARATOGA, CAL.—Subscriptions are being taken for the proposed electric road from Mayfield to Saratoga. F. M. Farwell and H. W. Postlethwaite, of Saratoga, are interested.

QUEBEC, QUE.—J. Arthur Maguire, Consul-General here for the Argentine Republic, at Quebec, writes us concerning the proposed electric railway in Buenos Ayres, S. A., as noted in our issue of Nov. 14, that the South American Trading Co. is being formed, and will probably be in active working order in about a month. The road will be 60 miles long.

ELECTRIC LIGHT AND POWER.

NEW COMPANIES.—People's Electric Light, Heat & Power Co., Avoca, Pa.; $18,000, with $1,800 paid in; Treas., Patrick J. Joyce, Pittston, Pa.

Lewiston Water & Power Co., Asotin, Wash.; $100,000; C. C. Vanarsdol, E. H. Libby, George Bailey.

Sugar Notch Light, Heat & Power Co., Sugar Notch, Pa.; $20,000, with $2,000; Treas., Geo. McDonald, Scranton.

Eliptical Carbon Co., Chicago, Ill.; $100,000; to manufacture carbons; Fred De Land, David T. Foley, Francis H. Drake.

Ashley Light, Heat & Power Co., Ashley, Pa.; $50,-

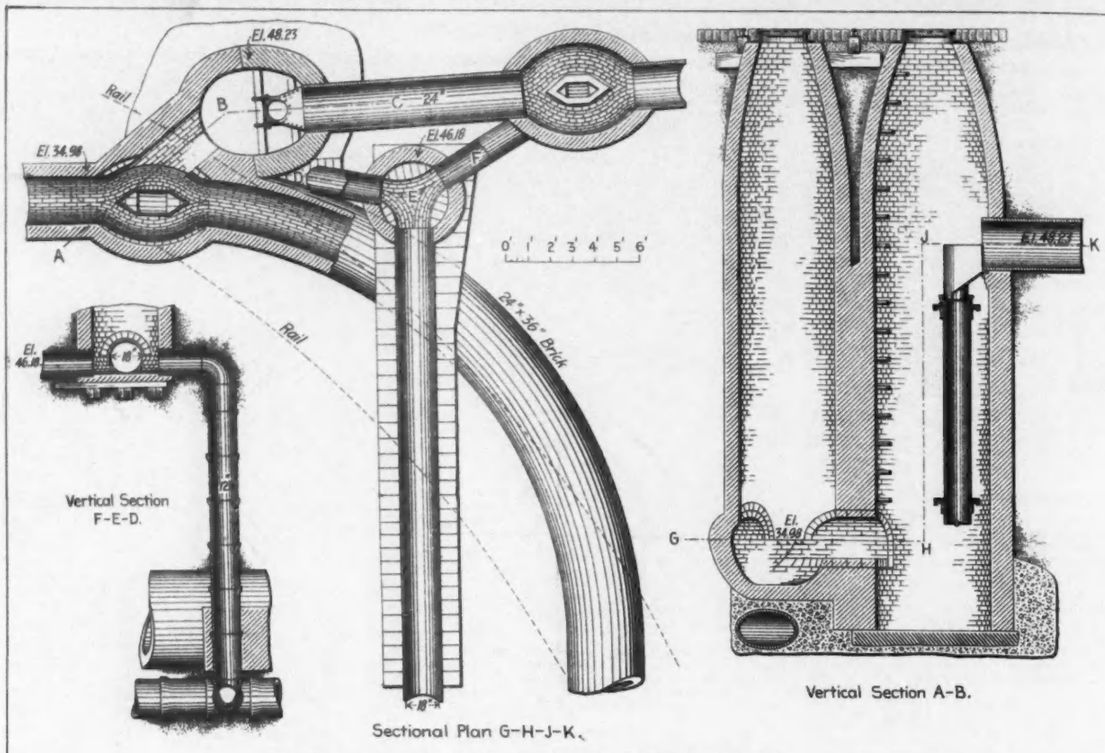


FIG. 8. DROP MANHOLE AND SUBSOIL DRAIN OVERFLOW.

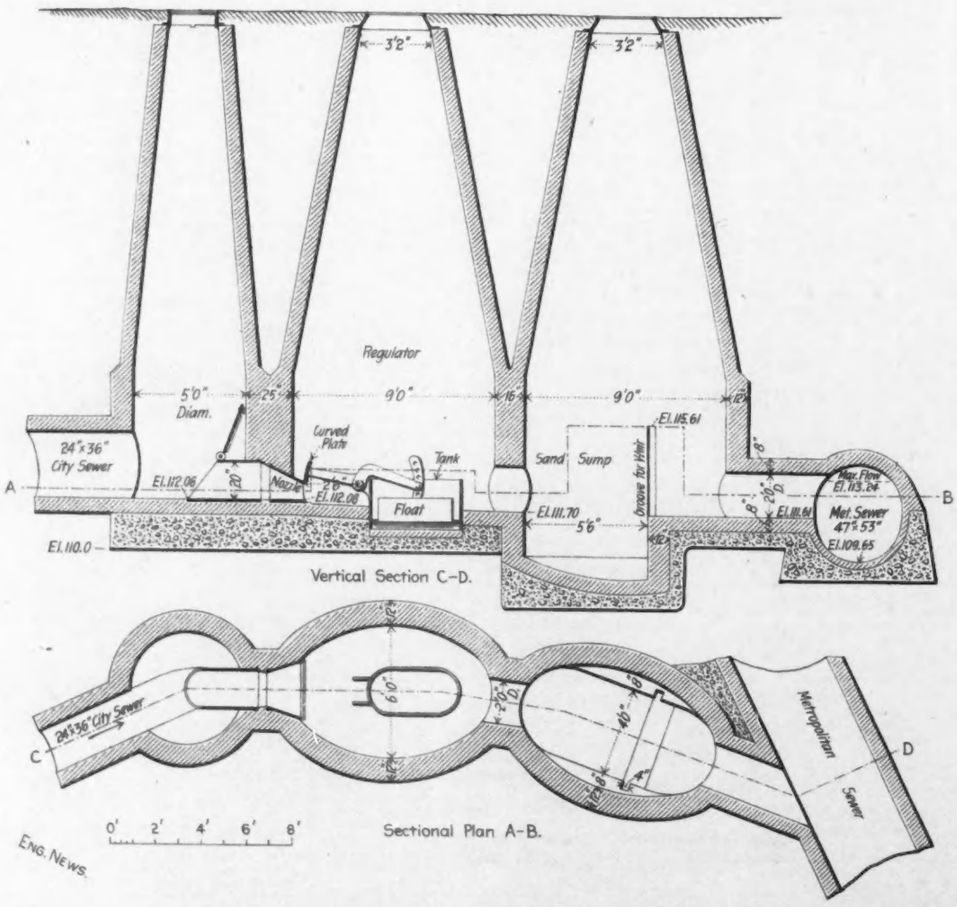


FIG. 7. CONNECTION BETWEEN NEWTON AND METROPOLITAN SEWERAGE SYSTEMS AT CRESCENT ST.

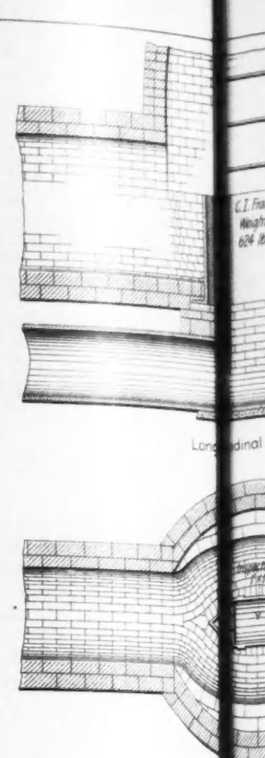


FIG. 4. MANHOLE

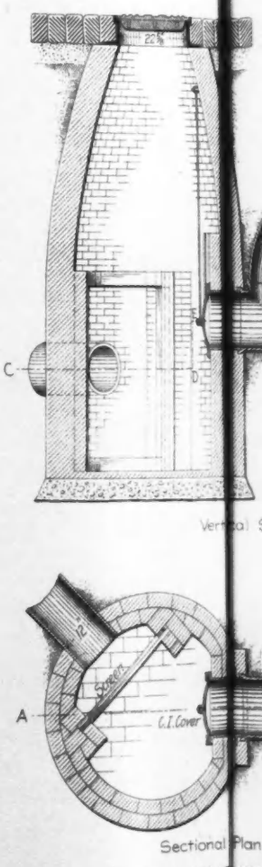
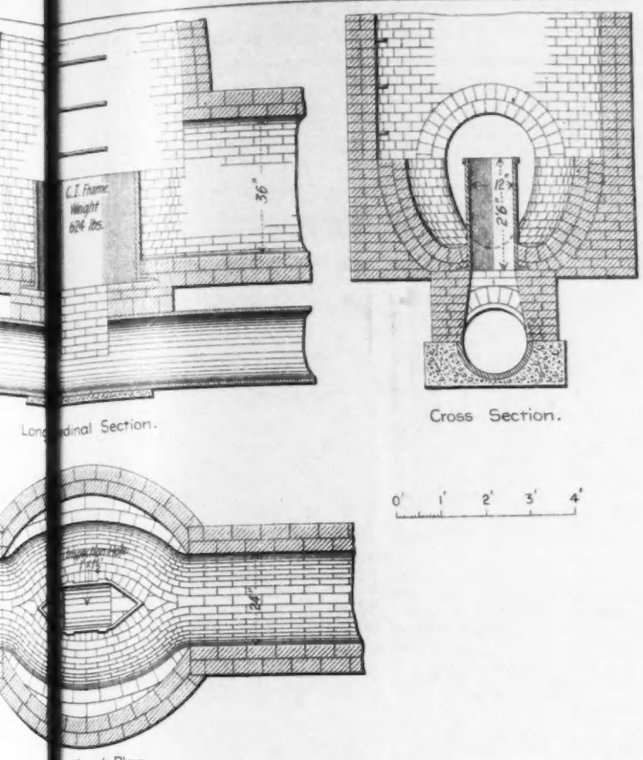


FIG. 5. MANHOLE ARR

DETAILS OF THE SEWERAGE AND SUBSOIL

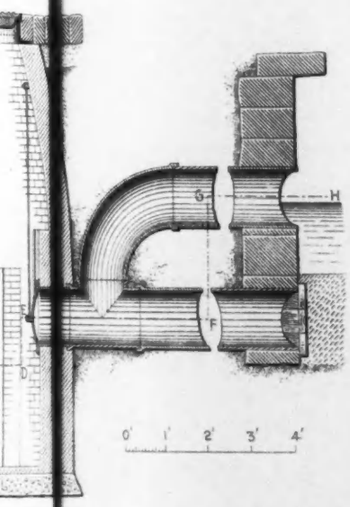
Albert F. Noyes, M. Am. S



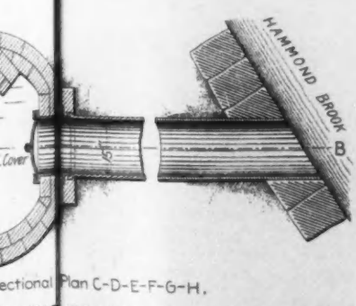
Long dinal Section.

ectional Plan.

. 4. MA OLE FOR BRICK SEWERS.



Vert al Section A-B.



ectional Plan C-D-E-F-G-H.

MANHOLE ARRANGED FOR FLUSHING SEWERS.

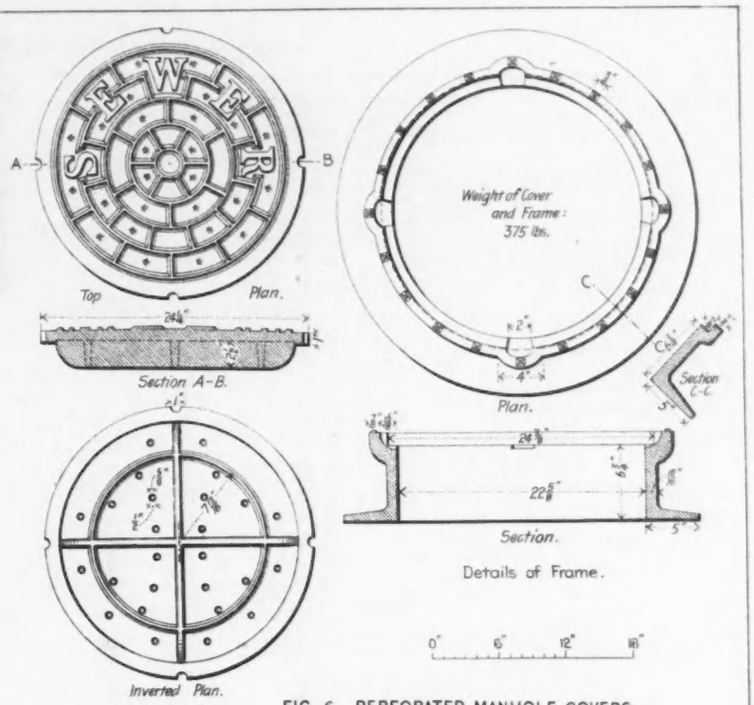


FIG. 6. PERFORATED MANHOLE COVERS.

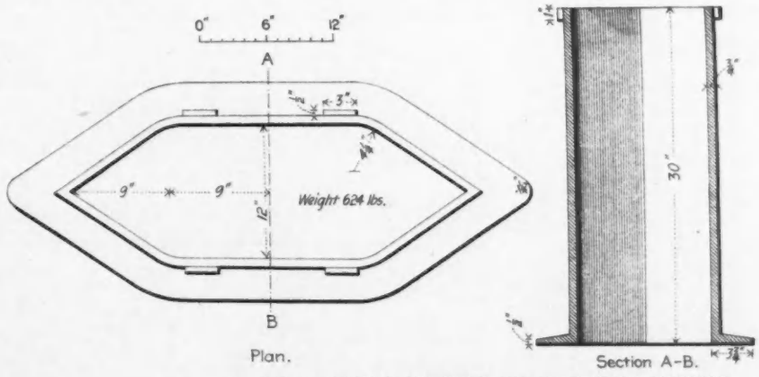


FIG. 2. DIVIDED MANHOLE AND INSPECTION CHAMBER FOR SUBSOIL DRAIN.

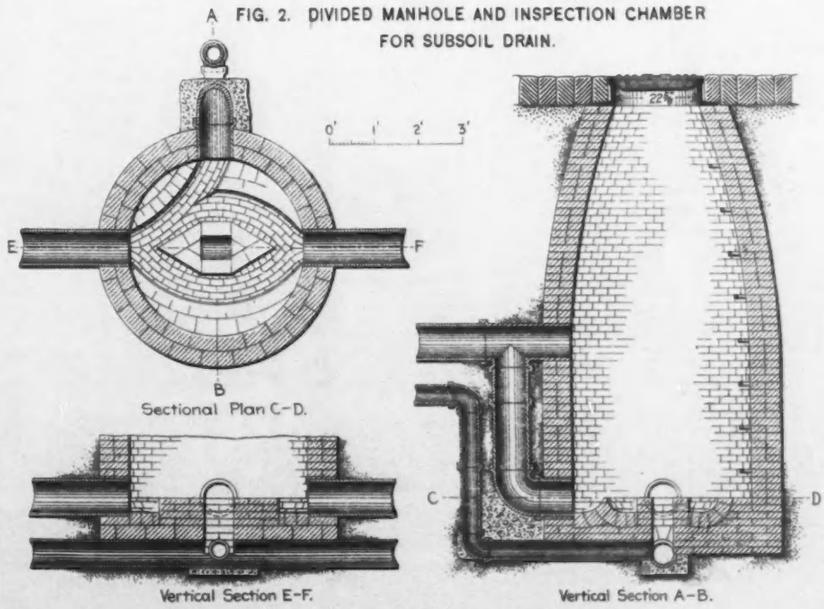


FIG. 3. MANHOLE FOR PIPE SEWERS.

SUBSOIL DRAINAGE SYSTEM OF NEWTON, MASS.

, M. Am. Soc. C. E., Engineer.

CHAS. HART & SONS, LITH., 20 HENRY ST., N. Y.

000, with $5,000 paid in; Treas., George McDonald, Scranton, Pa.

Warrior Run Light, Heat & Power Co., Warrior Run, Pa.; $20,000, with $2,000 paid in; Treas., George McDonald, Scranton.

Citizens' Avoca Light, Heat & Power Co., Avoca, Pa.; $20,000, with $2,000 paid in; Treas., George McDonald, Scranton.

Ohio Light, Heat & Power Co., Van Wert, O.; $10,000; G. L. Marble, Geo. Hayler, Jr., O. D. Swartout, John B. Stevenson, Jr.

Water, Light & Power Co., Herington, Kan.; $30,000; J. S. Brundage, H. S. J. Towner, T. M. Bixby, P. G. Dayton, R. A. Wilson.

Ladonia Electric Light Co., Ladonia, Tex.; $10,000; T. V. Richards, J. W. Nall, D. E. Wagoner and J. A. Jackson, all of Ladonia.

Akron St. Ry. & Illuminating Co., Akron, O.; $1,500,000; J. B. Clews, of Henry Clews & Co., Broad St., New York, N. Y.; J. A. Long, Ira M. Miller, Akron.

Martha's Vineyard Electric Light & Power Co., Cottage City, Mass.; $75,000; Pres. and Treas., John A. Duggan, 280 Washington St.; Josiah Quincy, 13 School St., both of Boston.

Mutual Union Investment Co., Elizabeth, N. J.; $100,000, with $1,000 paid in; to manufacture and supply electricity and power; Wm. S. Stryker, John W. Rehill, Somerville, N. J.; James P. Powers, Elizabeth.

Merced Falls Electric Power & Mfg. Co., San Francisco, Cal.; $1,000,000; Augustus Laver, Alameda, Cal.; Herman Jahn, San Francisco; Basil Owen, R. H. Duncan, Merced Falls, Cal.; John T. Fleming, Alameda.

Electro-Stero-Cosmorama Co., Winter Harbor, Me.; $50,000; to manufacture, exhibit and deal in stereo-cosmorama machines; Pres., C. C. Larrabee, Prospect Harbor, Me.; Treas., Bedford E. Tracey, Winter Harbor.

BUILDINGS.

NEWTON, MASS.—The Newton Masonic Hall Association has been incorporated with a capital stock of $50,000. It is proposed to erect a large hall at once. Pres., Geo. P. Whitmore; Treas., Edward P. Hatch; Directors, Chas. A. Kellogg, W. C. Boyden and J. C. Fuller.

HOWARD, R. I.—Bids are asked until Feb. 3 for erecting a county jail at the state farm in this place. Archs., Martin & Hall, 502 Industrial Trust Co. Bldg., Providence; Chas. H. Peckham, Secy., Board State Charities.

NEW LONDON, CONN.—An eight-story stone and steel building is to erected at once at State and Meridian sts., for Mr. Munsey. Architect Tuthill has completed the plans and specifications and it is stated bids will be asked at once.

ALBANY, N. Y.—Bids are asked by the Capitol Commission until Feb. 10 for completing the State capitol building in this city, as described in our advertising columns. Chas. T. Saxton, Chn. Com., Ira M. Hodges, Secy.

BINGHAMTON, N. Y.—Plans and bids are asked until Jan. 24 for a county jail of 50 cells, estimated cost, $40,000. L. B. Gleason, Chn. Com. Pub. Bldgs., Bd. Supervisors, Binghamton; A. W. T. Back Clk., 65 Court st., Binghamton.

BROOKLYN, N. Y.—Bids were asked until Jan. 7 for heating and ventilating two school buildings. J. R. Thompson, Chn. Com., Bd. Education, 131 Livingstone St., Brooklyn.—Clinton L. Rossiter, Pres. Brooklyn Heights R. R. Co., is quoted as stating that the company intends to erect in the Eastern District a new station in which there wil be over 120,000 sq. ft. of floor surface. There will oe in the building a reading-room and bathrooms for the men. A large brick repair shop is also to be built in South Brooklyn.

BUFFALO, N. Y.—Bids are asked by E. A. Kent, 94 White Bldg., until Jan. 31, for erecting a 5-story brick and stone building for stores and living apartments, for John Otto, on Main St. It will be 100 × 125 ft., and will cost $70,000. The frame work will be of iron. The Supervising Architect received the following bids, Dec. 23, for erecting the basement columns, first floor beams, etc., of the U. S. Public Building in this city:

		Time.
The Snead & Co Iron Works, Louisville, Ky.	$18,980	5 months.
New Jersey Steel & Iron Co., Trenton, N. J.	$23,200	6 months.
Fred. J. Myers Mfg. Co., Hamilton, O.	$19,400	6 months.
Brown-Ketcham Iron Works, Indianapolis, Ind.	$20,467	5 months.
L. L. Leach & Son, Chicago, Ill.	$27,783	6 months.
Buffalo Bridge & Iron Works, Buffalo	$20,390	120 days.

NEW YORK, N. Y.—Wm. M. Aiken, Supervising Arch., Washington, D. C., received the following bids Dec. 21, for furnishing 6,000 net tons of iron and steel for the appraisers' warehouse in this city:

	Bessemer.	Open Hearth.
Post & McCord, New York	$339,550	$339,550
Benj. Hyde & Co., Chicago	339,886	339,800
Pennsylvania Steel Co.	341,313	345,591
F. J. Myers, Hamilton, O.	344,400	366,400
M. Giblin, New York	352,220	356,220
Edge Moor Bridge Works	371,500	374,500
C. A. Schneider's Son, Washington, D. C.	377,583	377,583
Passaic Rolling Mill Co.	385,953	385,953
Youngstown Bridge Co.	495,987	438,734
New Jersey Steel & Iron Co.	406,600	406,600
Berlin Iron Bridge Co.	419,844	425,944
L. L. Leach & Son, Chicago	429,393	398,763

The following are the bids received Oct. 18 by the Supervising Architect for furnishing 11,000,000lbs. of iron and steel for the same building, but rejected as too high:

Edge Moor Bridge Works, Wilmington, Del.	$439,900
Michael Giblin, 134 West 80th St., N. Y. City	430,366
Post & McCord, New York, N. Y.	419,900
Jackson Architectural Iron Works, New York	435,000
New Jersey Steel & Iron Co., Trenton, N. J.	463,564

NEW YORK, N. Y.—Plans have been filed by Robt. Goelet, 591 Fifth ave., for a four-story brick theatre building on Lexington Ave., near 42d St., to cost $170,000. Man. Frank B. Murtha; Arch., J. B. McElfatrick, 1402 Broadway, New York; by the New York Life Insurance Co., Broadway and Leonard St., for a 12-story brick and stone office building at 346 and 348 Broadway, to cost $100,000. Archs. McKim, Mead & White, 150 Fifth ave., New York; by the Manhattan Savings Institution, for an eight-story office building at Broadway and Bleecker St., to cost $100,000; and by David H. King, 4 West 43rd St., for an eight-story hotel at 514 Fifth Ave., to cost $150,000. Archs. Howard & Cauldwell, 31 Pine St., New York. Henry Chaffer has purchased from Wm. F. Havermeyer, Mutual Life Insurance Bldg., the property at 47 and 49 Bleecker St., on which it is proposed to erect an office building.

JERSEY CITY, N. J.—Plans are asked by the Board of Education until Jan. 6 for a new $80,000 school building.—Bids are asked by the Board of Directors of the Palestine Building Association until Jan. 27 for the erection of a large hall in this city.

PITTSBURG, P. A.—C. L. Magee, of the Fort Pitt St. Ry. Co., has donated $100,000 to be used in the construction of a zoological garden at Highland Park, according to reports.

WASHINGTON, D. C.—W. M. Poindexter, of Washington, has been engaged to prepare plans for the American Methodist University Building. It is stated that John S. Herrell, M. G. Emery and A. B. Duvall have been appointed a committee to award the contracts.

ATLANTA, GA.—It is reported that work will be begun soon on the construction of a new Union Station in this city, to cost complete about $2,000,000.

SOCIAL CIRCLE, GA.—Bids are asked until Jan. 15 for erecting a school building. Archs., Hayden & Wheeler, 503 Equitable Bldg., Atlanta; J. O. Shepard, Chn. Bd. Education, social circle.

JACKSONVILLE, FLA.—Plans are asked for a public armory building to cost $25,000. W. F. Coachman, Chn. Bldg., Com., County Comrs., Jacksonville.

NEW ORLEANS, LA.—Bids are asked until Jan. 16 for the erection of the laundry and attendants building at the U. S. Marine Hospital, Wm. Martin Aiken, Supervising Arch., Washington. It is reported that the Illinois Central R. R. Co. intends to erect new warehouses at Southport.

NASHVILLE, TENN.—Bids are asked until Jan. 13, for erecting the woman's building for the Tennessee Centennial and International Exposition Co., E. C. Servis, Dir. Gen., Nashville.

FRANKFORT, KY.—It is stated that the governor is in favor of an appropriation sufficient to complete the state Capitol building.

CHICAGO, ILL.—Henry Ives Cobb, Title & Trust Bldg., Chicago, has been engaged to prepare plans for a laboratory to cost about $300,000 for the University of Chicago. Secy. Dr. Thos. W. Goodspeed, 5630 Kimbark ave.

CHEROKEE, IA.—Press reports state as follows concerning the new state insane hospital to be erected here, work on which will be begun at once by the commission: The main and center buildings and six sections or wings will first be completed, with a capacity of 450 patients, at a cost of about $500,000. Later on four ore sections will be added, as needed, with a capacity of 350 patients. This will be the largest asylum in the state and will cost whencompleted over $1,000,000. Sioux Falls granite will be used as building material, instead of brick as was first intended.

FERGUS FALLS, MINN.—W. B. Dunnell is reported as having prepared plans for a 174 x 50 ft. brick addition, four stories high, for the state insane hospital here. The addition is estimated to cost about $80,000.

HASTINGS, MINN.—The commission has voted to construct the fourth state insane hospital at this place. Address John F. Norrish, or Chas. E. Staples, Hastings.

HARRISONVILLE, MO.—It is stated that F. S. Maxwell, County Clk., has received the following bids for constructing the county court house:

M. S. Carlier & Co., St. Louis, Mo.	$52,525
F. W. Goodlander, Fort Scott, Kan.	40,905
*Thomas Wilson, Kansas City, Mo.	39,942
L. W. Divelbiss, Carthage, Mox.	40,078
T. H. Ludlow, Harrisonville	42,113

* Awarded contract.

KANSAS CITY, MO.—J. C. Rogers, of Wamego, Kan., is about to erect a 10-story building in this city, to cost $150,000, according to report.

DENVER, COLO.—Geo. H. Angell, Arch. Den., has prepared plans for a $125,000 auditorium for the Western Elstedfodd Association. The building will be 400 × 200 ft., and will seat about 16,000 people. James J. Humphreys and Wm. E. Fisher have also prepared plans for a similar building for the association. It has not yet decided which plans to select. Address J. B. Vroom, a member of the association, or Lloyd Jones, California Block, Denver.

OAKLAND, CAL.—Cunningham Bros., Archs. Oakland, have prepared plans for a permanent building for the Oakland Industrial Exhibition.

SAN FRANCISCO, CAL.—Plans have been prepared for a new four-story convent building for the Sisters of Notre Dame, at Dolores and 16th sts. The committee on municipal buildings of the board of supervisors is considering the question of securing plans for a new criminal building on the site of the old city hall. Estimated cost, $300,000. The city surveyor has been directed to make a survey of the site. Prizes will probably be offered for the most favorable plans.

WATER-WORKS.

ROCHESTER, N. H.—E. H. Gowing, of Boston, has made an examination of the water supply to determine the cause of an objectionable odor and taste noticed, and has recommended that surveys be made for an independent 16-in. main from Round Pond to the distribution system, and also for a line of increased capacity from the pond to the reservoir, and for a second main from the dam to the distribution system; also that the meter system be adopted for large consumers, in order to prevent a waste of the supply.

HALLOWELL, ME.—The council has directed the city clerk to notify the Hallowell Water Co. that the city is ready to purchase the works at a price to be mutually agreed upon, as authorized by the legislature last March. E. H. Gowing, of Boston, has reported that new works can be constructed for $71,000 to $75,000.

RUTLAND, MASS.—Thompson & Wheeler, of Worcester, have been engaged to make surveys and plans for the proposed works.

GLENS FALLS, N. Y.—A special election will be held in South Glens Falls Jan. 10 to vote on an issue of $50,000 in bonds for works, as noted last week. Harmon B. Parks, Pres. Village Trustees.

LANSINGBURG, N. Y.—The water commissioners have adopted a resolution requiring all consumers to put in meters before Feb. 1.

NEW YORK, N. Y.—The New York & Westchester Water Co. has voted to increase its capital stock from $500,000 to $10,000,000. It is stated that the company will extend its mains and build new storage reservoirs at Pocantico Lake, D. F. Cameron, Secy.

OLEAN, N. Y.—Eugene McElwain, of Bradford, Pa., is interested in a project to supply this place and Allegany with water from wells. It is stated that the question is now being investigated and that if these investigations are favorable, the plants will be constructed.

LEWISTOWN, PA.—The Lewistown Water Co. has just finished surveys for the bringing of a new water supply from Mincharts Gap to the town, and will probably begin work on same some time in May or June. They will probably lay in a 12-in. main. S. B. Weber, Pres., Lewistown, Pa.

CORAOPOLIS, PA.—The People's Water Co., of Coraopolis, was incorporated Dec. 20 with a capital stock of $5,000, to supply water in this borough. Treas., Geo. A. Lashell.

DU BOIS, PA.—Press reports state that owing to a decision of the courts, the Du Bois Water Co. will remove its hydrants and the town will probably vote on a proposition to construct municipal works

LIGONIER, PA.—It is reported that the people will vote on building works at an election in February. It is said that the supply will be from Laurel Run, 8 miles distant.

WILKES BARRE, PA.—The incorporation of the Prospect Rock Water Co. was noted in our issue of Dec. 12. Local papers state that the company will soon begin the construction of two large reservoirs at the foot of the mountain. The company proposes to supply water in the borough of Laurel Run. Pres. John Gunney, Wilkes Barre; Secy., Patrick M. Kelly, of Georgetown.

ELKINS, W. VA.—It is reported that the village will issue $25,000 of bonds for works.

FAIRMOUNT, W. VA.—The Valley River Water Co. has been incorporated with a capital stock of $100,000. A. B. Fleming, Clarence L. Smith.

WESTON, W. VA.—It is stated that the question of waterworks will be voted upon soon.

HICKORY, N. C.—A correspondent writes us that this town will soon issue $40,000 in bonds for waterworks.

PERRY, GA.—It is reported that bonds for works will be issued.

GREENWOOD, MISS.—B. Richardson, Town Clk., writes us that bids with plans and specifications for waterworks will be received by the council on the first Tuesday in January. No contracts have yet been awarded; population, 2,000.

LAFAYETTE, LA.—Bids will probably be received in February for constructing the proposed waterworks and electric light plant. Engr., Robert R. Zell, 16 Goodeaux Bldg., New Orleans; T. M. Blossat, Chn. Com.

SOUTH OMAHA, NEB.—The South Omaha Water Works Co. has purchased ten acres of ground and it is stated that work on the wells will be commenced at once. Several improvements are contemplated.

GRANT CITY, MO.—S. C. Davidson, Cy. Clk., writes us that Joseph S. Simmons, of Bethany, Mo., is preparing plans and specifications for the new works, for which $5,000 in bonds will be issued. The plant will include a gasoline engine, pump, tank and 3-in. and 4-in. cast-iron pipe.

TOLEDO, O.—Bids are wanted until Jan. 21 for 15,000 ft., or about 2,800 tons of 30-in. cast iron pipe; 58 tons specials; 5 30-in., 20 12-in., 10 8-in. and 30 6-in. valves. T. R. Cook, Supt.; J. D. Cook, Toledo, Consulting Engr.

TURNER, ILL.—Bids are wanted until Jan. 18 for the purchase of $12,000 of bonds for works. T. G. Iserwood, Chn. Com. on W. Wks. Bids for works were received Dec. 14 and 28, as stated in our issue of Dec. 12.

DULUTH, MINN.—Bids are wanted until Jan. 13 for a intake well, pipe and crib for the proposed city waterworks. W. B. Patton, Cy. Engr.; M. J. Davis, Pres., and R. Muschison, Clk., Bd. Pub. Wks.

IRRIGATION.

CHAMBERLAIN, S. DAK.—Press reports state as follows: Stockmen west of the Missouri River propose to engage quite extensively during the coming season in windmill irrigation. A. Brakke, one of the stockmen, has just completed erecting a large windmill on his ranch, and will next year irrigate about 25 acres of land. George Dunkle, whose ranch is near Westover, will erect four windmills, and proposes to irrigate his entire ranch of 300 acres. John Brown, another cattleman, living near Westover, is now working on a large irrigating plant of his own.

SEWERAGE.

YARMOUTH, ME.—At a town meeting held recently, it was voted to issue $40,000 in bonds for sewers and water-works, according to reports.

STONEHAM, MASS.—Stephen P. Finnegan, Chn. Sewer Comrs., writes us that the sewer commissioners have reported plans and estimates of the cost to the town, which has voted favorably to build about 14 miles of sewers, and also authorizing the commissioners to petition the next legislature for an act authorizing the town to build sewers and to issue bonds. Engr., B. R. Felton, 10 Tremont St., Boston.

WAKEFIELD, MASS.—M. Low, Secy. Sewer Com., writes us as follows concerning the proposed system for which a committee has been appointed, as noted in our issue of Dec. 5: A system for Wakefield was designed in 1892 by L. E. Hawes, 75 State St., Boston, and received the approval of the state board of health. In November a committee of seven was appointed which is to report to the town in March upon methods of assessments and of sewage disposal in other towns. The committee consists of Louis E. Hawes, Chn.; M. Low, Secy.; Henry H. Savage, F. A. Gowin, W. G. Strong,

Wm. H. McCausland and E. A. Carlisle. Later reports state that the town voted, Dec. 23, to instruct the committee to petition the legislature for permission to include two districts of the town—Greenwood and Boyntonville—in the North Metropolitan Sewerage district. It was also voted to apply to the legislature, looking toward the co-operation of Lynn, and possibly Reading and Saugus, in the construction of a sewer through the Saugus Valley to the ocean. It was stated that a sewerage system could be built at an expense not to exceed $200,000.

NIAGARA FALLS, N. Y.—It is probable that bids will be asked by the Board of Public Works soon for constructing a tunnel sewer, 60x40 ins., for a distance of 1,333 ft., at an estimated cost of $26,500. W. W. Read, Cy. Engr.; J. F. Arkush, Cy., Clk.

SCRANTON, PA.—The question of constructing sewers in Hyde Park, a suburb of this city, is being discussed, according to reports.

WILMERDING, PA.—Bids are asked until Jan. 7 for constructing an 8-in. pipe sewer. C. C. Cornell, Borough Clk.

WILMINGTON, DEL.—Plans are being prepared for extending the sewer system in the spring at an estimated cost of about $80,000. T. Chalkley Hatton, Engr. St. and Sewer Dept.

WILSON, N. C.—Bids are asked until Jan. 30 for constructing pipe sewers and also for furnishing 5½ miles of 15 to 6-in. sewer pipe, as stated in our advertising columns. John F. Bruton, Mayor; J. L. Ludlow, Engr., Winston, N. C.

MACON, GA.—It is stated that the city engineer has submitted a report on a proposed system, estimated to cost about $130,000.

CHILLICOTHE, O.—Plans are being considered for a system, which contemplate the construction of a submerged outlet sewer at the Bridge St. bridge. Edward Kern, Chm. Sewer Com.

EAST ST. LOUIS, ILL.—Bids are asked until Jan. 15, for constructing about 15,000 ft. of 24 to 6-in pipe sewers, etc. H. F. Bader, Mayor, L. L. Harper, Cy. Engr.

ELGIN, ILL.—We are informed that Sam'l M. Gray, Providence, R. I., is perfecting plans for a system of sewage purification. A full report of the commission will be made the first of next year. Nothing can be decided upon concerning construction during the year until action has been taken by the people and the council.

MARSHFIELD, WIS.—The Iowa Engineering Co., Chas. P. Chase, Man., Clinton, Ia., has prepared plans for a system 14 miles long with intermittent filtration beds. We are informed that the conditions are favorable, and the project will probably be carried out.

MILWAUKEE, WIS.—The board of public works has asked the council for an appropriation of $140,000, to begin the construction in the spring of the proposed Kinnickinnic River sewer flushing works, estimated to cost about $300,000. An appropriation of about $300,000 additional has been asked for the construction of sewers in the West, East, South and Bay View sewer districts. Geo. H. Benzenberg, Cy. Engr.

GRINNELL, IA.—We are informed that the city has purchased 30 acres of land for sewage filtration purposes, and will use the regular intermittent filtration beds. The sewer system, 9⅝ miles long, is just completed. Nothing can be done on the filter beds this year. The Iowa Engineering Co., Chas. P. Chase, Man., Clinton, Ia., prepared the plans.

MUSCATINE, IA.—Walter M. Hay, Cy. Engr., has been instructed by the council to prepare plans and specifications for a sewer over Pappoose Creek. We are informed that the sewer will be 15ft. in diameter at its smallest end and is to be gradually enlarged towards its lower end. The length will be 16,000 ft.

WESTPORT, NEV.—The public improvement committee of the council has received the following bids for constructing sewers: Robert Boyd, $7,190; G. J. Baer, $6,798; Charles F. Seested, $5,352.

SAN FRANCISCO, CAL.—The supervisors have directed the city engineer to prepare plans for a sewer system in the district bounded by 18th, Missouri, 20th, Connecticut, 22nd, and Rhode Island Sts.——J. H. Humphreys, engr., has been engaged to superintend the construction of a system through the Presidio Reservation, as an outlet for the sewerage of the Presido Heights district.——It is proposed to construct sewers in a number of other streets. John A. Russell, clk.

STREETS AND ROADS.

BRIDGEPORT, CONN.—The street committee has asked for an additional appropriation of $17,000 for paving two streets with asphalt, for which $10,000 has already been appropriated

ALBANY, N. Y.—The street committee has recommended the paving of Ellerton Place with brick.

CORTLAND, N. Y.—The trustees are to petition the legislature for authority to pave the streets with asphalt, macadam, etc.

JAMAICA, N. Y.—John J. McLaughlin, county engr., is to prepare plans for macadamizing the Hempstead and Jamaica turnpike, according to reports.

NEW BRIGHTON, N. Y.—It is reported that the supervisors have directed county engineer to prepare advertisements asking for bids for improving about 20 miles of road, the work to be begun early in the spring.

CAPE MAY, N. J.—This city voted, Dec. 31, in favor of issuing $50,000 in bonds for paving, etc.

WILMINGTON, DEL.—T. C. Hatton, Engr. St. Dept., is preparing plans for about $128,000 worth of paving and $80,000 of sewer extensions. This work will be done in the spring.

JACKSONVILLE, FLA.—The Panama Park Co. has received the following bids for constructing a bicycle track:

Jacksonville Construction Co.	$6,790
W. M. French & Co., Jacksonville	7,485
M. Michels & Co., Deland, Fla.	9,795
A. G. Chatwick, Jacksonville	7,250
Geo. T. Hood, Jacksonville	8,356
Frazier & Whitney, Louisville	7,890

MERIDAN, MISS.—Plans are being prepared for $105,000 worth of paving. N. M. Brandon, Cy. Engr.

HARRIMAN, TENN.—Bids are asked until Jan. 7 for constructing about 13,500 ft. of county road, according to reports. G. W. Pearsall County Engr.; G. H. Freeman, Chn. Road Cmrs.: H. P. Carter, Road Comr., Harriman.

CINCINNATI, O.—Bids are asked until Jan. 11 for macadamizing Carthage Pike; bonds, $2,000. A. P. Butterfield, Clk. Bd. Administration.

COVINGTON, KY.—It is proposed to pave about 65,000 sq. yds. with either macadam, brick or sandstone. T. H. Kennedy, Cy. Engr.

TOLEDO, O.—Bids are asked until Jan. 20 for asphalt paving in Monroe st. Lem P. Harris, Cy. Clk.

LANSING, MICH.—The council has voted to pave 20,865 sq. yds. with brick at an estimated cost of about $50,000. Jasper C. Davis, Cy. Engr.; Chas. S. Loomis, Cy. Clk.—The residents of North Lansing have petitioned the council to pave Franklin st.

EAST ST. LOUIS, ILL.—Bids are asked until Jan. 15 for 21,000 sq. yds. of brick or macadam paving. H. F. Bader, Mayor; L. L. Harper, Cy. Engr.

MILWAUKEE, WIS.—It is stated that the city officials are making arrangements to construct a lake front boulevard. Geo. H. Benzenberg, Cy. Engr.

BOONE, IA.—Bids are asked until Jan. 8, for 8,245 sq. yds. of brick paving, 4,000 line ft. of curbing, etc. R. M. Mitchell, Cy. Engr.; Jesse L. Hill, Cy. Clk.; A. S. Farrow, Mayor.

MUSCATINE, IA.—We are informed that the council has instructed Walter M. Hay, Cy. Engr., to prepare plans and specifications for 20 blocks of street paving and six blocks of alley paving, all the work to be of brick.

DULUTH, MINN.—An election is to be held Feb. 4 for the county to vote on the question of issuing $150,000 in bonds for constructing roads in St. Louis County.

MINNEAPOLIS, MINN.—It is proposed to pave 137,612 sq. yds. in 11 different streets in the spring. F. W. Cappelen, Cy. Engr.

ST. PAUL, MINN.—The board of public works is stated as making arrangements to let cotracts about April for paving a large number of streets with asphalt, etc. L. W. Rundlett, Cy. Engr.

HELENA, MONT.—The commissioners of Lewis and Clarke county are considering the question of constructing several long roads. Paul S. A. Bickel, County Surv., Helena.

cu. yds., 23 cts. a yd.; extra stone, 100 cu. yds. $1.60; total, $3,538. Geo. B. Hawley, Cincinnati, pig lead, 25,000 lbs., 3.22 cts. a lb.; total, $805. McElvaine, Richard Co., Indianapolis, 46 3-in. double-nozzle hydrants, 27 4-in. valves and boxes, 3 8-in. valves and boxes, 9 10-in. valves and boxes, no itemized prices, $1,985

PIPE SEWER.—Valparaiso, Ind.—Thos. H. Carver, Cy. Engr., writes us that a contract for 1,158 ft. of 8-in. pipe sewer was awarded on Dec. 19 to Madlem & Frink, of Goshen, Ind. The other bidders were residents of this city. The bids were as follows:

Iron	Madlem & Frink.	*Don Salyer.	A. Parks.	*Chas. Dickover.
8-in. pipe, 1,158 ft., per ft.	$0.13½	$0.12½	$0.20	$0.15
Excavation and backfilling	0.33	0.30	0.29	0.25
Lampholes, each	5.00	1.03	1.24	....
	$533.00	$489.00	$573.00	$403.00

*Informal.

ELECTRIC LIGHTING.—Philadelphia, Pa.—Bids were opened Dec. 23 for electric street lighting. The estimates called for 6,228 lamps, against 5,293 one year ago, and local papers state that the bids were as follows: Manufacturrs' Electric Light Co., 300 lights at 38 cts. a light a night, 117 at 35 cts. and 30 at 33 cts. Wissahickon Electric Light Co., 164 lights at 40 cts. Suburban Electric Light Co., 503 lights at 40 cts. Powelton Electric Light Co., 588 lights at 35 cts. and 30 at 33 cts. Southern Electric Light Co., 448 lights at 38 cts. 440 at 35 cts. and 163 at 33 cts. Kensington Electric Light Co., 279 lights at 40 cts. Diamond Electric Light Co., 127 lights at 38 cts., 275 at 35 cts. and 78 at 33 cts. Germantown Electric Light Co., 194 lights at 42 cts. Brush Electric Light Co., 78 lights at 37 cts., 2,046 at 35 cts., and 332 at 33 cts. The estimated average cost of each lamp under these figures is 36.42 cts. a night, or $132.63 a year. No contracts will be awarded until the appropriation ordinance is passed.

RESERVOIR EMBANKMENTS.—Tarrytown, N. Y.—The awarding of the contract for constructing rese voir embankments, as advertised in Engineering News, was noted in our issue of Dec. 19. D. S. Merritt, Engr. and Supt., writes us that the bids were as follows:

Bids Received at Tarrytown, N. Y., for Constructing Reservoir Embankments.

Bidder.	Lump sum.	Approximate amount of extra quantities. Earth excav. 3,000 cu. yds.	Rock excav. 1,000 cu. yds.	Earth Refilled 3,600 cu. yds.	Concrete 50 cu. yds.	Rubble masonry 400 cu. yds.	Brick 50 cu. yds.	Total bid.
Eldridge & Fogg, Sing Sing, N. Y.	$32,990	$0.50	$2.50	$0.37	$5.00	$4.50	$12.00	$40,972
Miner & Reilly, 31 Broadway, N. Y. City	33,996	.39	2.27	.25	5.00	4.25	10.00	40,786
Frank W. Mollay, New Rochelle, N. Y.	35,500	.40	2.00	.30	9.00	6.00	18.00	43,530
Catterbury & Pistone, Jerome Park, N. Y. City	34,650	.30	1.25	.25	4.50	2.50	17.00	39,775
Carroll & Co, Yonkers, N. Y.	35,500	.50	1.00	.25	3.00	4.00	8.00	41,050
Fennell & O'Hern, Yonkers, N. Y.	49,244	.23	.80	.20	6.00	3.90	15.00	54,664
Donato Cuozzo, 386 Broome St., N. Y. City	39,986	1.00	4.50	.40	6.40	5.00	11.00	51,796
Gallo & McNiece, 146 Broadway, N. Y. City	42,349	.85	4.00	.40	6.00	7.00	15.00	54,189
Norton & Dalton, 1476 2d Ave., N. Y. City	42,750	.50	2.50	.50	5.50	4.50	10.00	51,125
R. B. Lewis & Co., Herkimer, N. Y.	42,300	.30	1.50	.30	7.50	5.00	12.00	48,935
Van Vranken & Duell, Tarrytown, N. Y.	27,990	.60	3.50	.50	8.00	8.00	12.00	39,290
Dougherty & Berrigan, Yonkers, N. Y.	37,100	.75	4.00	.60	6.00	3.00	17.00	47,860
James Bird, Tarrytown, N. Y.	32,000	.50	3.00	.40	7.00	7.00	12.00	41,690

SAN FRANCISCO, CAL.—Albert E. Buckman has been awarded the contract by the park commissioners, at $7,800, for extending the Ocean Boulevard one mile. The boulevard is now 2 miles long and 40 ft. wide.

MISCELLANEOUS CONTRACTS AND SUPPLIES.

STREET CLEANING.—Philadelphia, Pa.—The lowest bids received Dec. 23 for street cleaning, were as follows: First district, K. & D. Dooley, $81,000; Second district, R. J. & A. Peoples, $147,880; Third district, D. C. McMahon & Co., $39,400; Fourth district, D. C. McMahon & Co., $122,000; Fifth district, D. C. McMahon & Co, $69,950; Sixth district (Broad st.), B. & J. Sullivan, $32,688. George W. Ruch, who now has the contract for cleaning Broad st., bid $34,974.

DEEPENING CREEK, ETC.—Saginaw, Mich.: Bids Bids are asked until Jan. 10 for cleaning, straightening and deepening a portion of Cheboygan Creek. Engr., Chas. Holmes, 501 South Park st., Saginaw; Chas. Schlickum, Secy. County Commissioners, Saginaw.

SALE OF CANAL, YORK, PA.—All the franchises and property of the Susquehanna Canal Co. are to be sold at auction on Jan. 18. The property to be sold is 30 miles long, from Columbia to the Maryland state line, at the western side of the Susquehanna River. At the same time the franchises, etc., of the Tidewater Canal Co. will also be sold. This property reaches from the Maryland state line to Havre de Grace, a distance of 15 miles. Geo. L. Van Bibber, T. Johnson Poe, trustees and receivers.

REPAIRING FIRE BOAT, New York, N. Y.—Bids are asked by the fire department, 157 East 67th st., until Jan. 8, for repairing the fire boat, "William F. Havemeyer."

BULKHEAD WALL, Brooklyn, N. Y.—Bids are asked until Jan. 10 for constructing about 700 ft. of bulkhead wall at Wallabout Basin; surety, $15,000. Alfred T. White, Comr. Cy. Wks.

STATE CANAL WORK, Rochester, N. Y.—Bids are asked until Jan. 8, for repairing and extending the high retaining wall of a portion of the Erie Canal in this city. R. G. Lay, Asst. Supt. Pub. Wks., Rochester; Geo. W. Aldridge, Supt. Pub. Wks., Albany.

REMOVING WRECKS, Norfolk, Va.—Bids are asked until Jan. 30 for removing the wrecks of two schooners lying in Hampton Roads, Va., as stated in our advertising columns. Capt. Thos. L. Casey, U. S. Engr., 106 Granby st., Norfolk.

CONTRACT PRICES.

WATER-WORKS.—Winton Place, O.—Chas. A. Ewing, Engr., 36 Carlisle Building, Cincinnati, writes us that contracts for works have been awarded as follows: J. B. Clow & Son, Chicago, 561 tons of 10 to 4 in. pipe, at $21.90, and 8 tons of special castings, at $45 a ton; total, $12,646. John Snyder, Norwood, O., laying 4 and 6 in. pipe, 10 cts. a ft.; 8 in., 11 cts.; 10 in., 12 cts.; setting 40 fire hydrants, 40 cts. each; setting 61 valves and boxes, 10 cts. each; extra excavation, 100

STONE ROAD.—Jacksonville, Fla.—The county commissioners have contracted with H. L. Babbitt for 7,500 tons of 2½ to 13 in. flint rock, to be delivered f. o. b. cars near the road, at $1.69 a ton, for building about four miles of road. The roadway will be 16 ft. wide, and the stone 5 to 7 ins. in depth. The road will be built by convict labor. The stone selected will come from the vicinity of Archer, in Alachua county, where it is found in large boulders. The bids for De Leon Springs shell were at $1.10 and $1.48 a ton, and for granite at $1.85 and $2.15.

WATER-WORKS.—Greenville, Miss.—The awarding of the contract for constructing water-works, as advertised in Engineering News, was noted under Waterworks, Dec. 26. The prices of the successful bid were as follows: Pumping station, etc., except pump, $18,170; two 1,250,000-gallon pumps, Dean, $4,463; Snow, $3,000; 100 fire hydrants, $2,338; distribution system, $31,263; specials, $1,089; one 12-in. valve, $33; one 10-in., $26; four 8-in., $73; thirty 6-in., $220; one hundred 4-in., $745; total bid, cash basis, $58,323. The total bids received were as follows:

G. Jaeger, Rich Hill, Mo.	$58,323
Goodrich Bros. Winchester, Ind.	[2]62,486
C. & T. Iglehart, Morgan Park, Ill.	[3]66,088
John T. Reilly & Co., Louisville, Ky.	70,634
J. S. Gabaury, Bowling Green, Ky.	65,924
Murphy and Philburn	[2]69,415

Add 25 per cent. if paid in 6 per cent. 20-year bonds at par.
[2]$77,000 if paid in bonds.
[3]Add 13 per cent. if paid in bonds.

WATER-WORKS.—Riverside, O.—Contracts for constructing a system of water-works in this suburb of Cincinnati have been awarded as follows: Addyston Pipe and Steel Co., 10 to 4-in. cast-iron pipe, $24 a ton; 11 tons of special castings, $50; total, $21,622. Bourbon Copper & Brass Works, 57 3-in. double-nozzle hydrants, $25.50 each; 12 4-in. valves and boxes, $8.30; 28 6-in. valves and boxes, $11.85; 19 10-in. valves and boxes, $23.35. Frank Burns, Cincinnati, 12, 13an d 16 cts. a ft. for laying 4, 6 and 10-in. pipe; $1 each for setting hydrants; 25 cts. each for setting valves and boxes; 1ct. for extra excavation; total, $6,003. Merkell Bros. Cincinnati, 40,000 lbs. pig lead, 3½ cts. a lb.; total, $1,333. Chas. A. Ewing, Engr., 36 Carlisle Bldg., Cincinnati.

IRRIGATION WORK.—Los Angeles, Cal.—Wm. A. Burr, Engr., writes us as follows: The bids received in October on the work for Kaweah Irrigation & Power Co.'s works at Visalia were unsatisfactory, and so we have done the work ourselves. The lowest bids ran as follows: Tunnel, 6x6 ft., $6.99¼ per ft.; flumes, $7.50 per M. (construction only); rock, $1.25 per yd.; loose rock, 50 cts.; hard pan, 65 cts.; gravel, 25 cts.; earth, 17 cts. The cost to date of construction has been about as follows: Rock, 90 cts.; loose rock, 30 cts.; hard pan, 25 cts.; gravel, 22 cts.; earth, 9 cts. Only ordinary scrapers, teams and hand labor on rock are employed; flumes and tunnel not thoroughly under way yet.

CONTENTS OF SUPPLEMENT.

PERSONALS 5
ENGINEERING SOCIETIES 5
Coming Technical Meetings 5
CONSTRUCTION NEWS:
List of Contracts Pending 6
Railways 6
Street and Electric Railways 7
Electric Light and Power 8
Bridges 8
Buildings 9
Water-Works 9
Irrigation 10
Sewerage 10
Garbage Disposal 11
Streets and Roads 11
Manufacturing Plants 11
Miscellaneous Contracts and Supplies 12
Contract Prices 12
INDUSTRIAL NOTES 1

PERSONALS.

Mr. A. W. Dean has been elected City Engineer of Nashua, N. H.

Mr. John A. Noblit, contractor, of Watertown, Pa., died Dec. 30.

Mr. Edwin L. Lane has been elected City Engineer of Gloucester, Mass.

Mr. William Craig, Superintendent of the Duluth Gas & Water Co., Duluth, Minn., has resigned.

Mr. J. N. Ross has resigned his position as Superintendent of the Sixth Division of the Southern Ry.

Mr. C. W. Risley has been appointed Superintendent of the Lima Northern R. R., with headquarters at Lima, O.

Mr. M. M. Drake, of Buffalo, N. Y., has been appointed Commissioner of Public Works, to succeed Mr. G. S. Gatschell.

Mr. W. D. Lovell, of the engineering firm of Crellin & Lovell, Des Moines, Ia., was married Dec. 25th to Miss J. A. Remley, of Iowa City.

Mr. J. D. Moore has been appointed Superintendent of Terminals of the Missouri Pacific Ry., at Kansas City, Mo., succeeding Mr. J. C. Hennessey, resigned.

Mr. T. A. Mackinnon, General Manager of the Boston & Maine R. R., has been made First Vice-President, with authority over the operating and construction departments.

Mr. F. J. Cole, has resigned his position as Mechanical Engineer of the Baltimore & Ohio R. R., to accept a position with the Rogers Locomotive & Machine Co., of Paterson, N. J.

Mr. Chas. E. Schaff, Assistant General Manager of the Cleveland, Cincinnati, Chicago & St. Louis Ry., has been appointed General Manager, with headquarters at Cincinnati, O.

Mr. R. M. Hannaford has been appointed Bridge Engineer of the Grand Trunk Ry., with office at Montreal. He was formerly with the Phoenix Bridge Co., of Phoenixville, Pa.

Mr. Addison M. Farwell, contractor, of Watertown, N. Y., died Dec. 30. He built part of the Brooklyn water-works, and a number of large buildings in Brooklyn and New York.

Mr. E. P. Bryan has been appointed General Manager of the Terminal Railroad Association of St. Louis, to succeed Mr. Joseph Ramsey, Jr., who is now General Manager of the Wabash R. R.

Mr. W. A. Garrett has resigned his position as Superintendent of the St. Louis Merchants' Bridge Terminal Ry., to accept that of Superintendent of the Western Division of the Wabash R. R.

Mr. W. J. Haskins, M. Am. Soc. C. E., has been appointed Consulting Engineer for the Steel Cable Engineering Co., New York city. The company manufactures hoisting and conveying plants.

Mr. Seely Dunn, Superintendent of the Clarksville and Princeton Division of the Louisville & Nashville R. R., has been transferred to the Owensboro & Nashville Division, with headquarters at Russellville, Ky.

Mr. Allen Hazen, of Boston, Mass., delivered an address on "Modern Methods of Supplying Cities with Pure Water," at the annual meeting of the Michigan Engineering Society, held at Saginaw, Mich., this week.

Mr. John McDowell Goldsborough, Civil Engineer, died at Baltimore, Md., Dec. 31. He was engaged as the contractor of the Baltimore & Susquehanna R. R., now part of the Northern Central R. R., and during the war was in charge of the Manassas Gap R. R.

Mr. Charles Sproatt, formerly City Engineer of Toronto, Ont., died recently at Innisfail, Alberta, N. W. T. He was sixty years of age, and had been in poor health for some time. In company with the late Mr. Frank Shanly, also once city engineer, Mr. Sproatt did a great deal of work on the railways of Ontario. He resigned his position as City Engineer of Toronto in 1890.

Mr. J. V. Musgrove, formerly Superintendent of the Chattanooga & Lookout Mountain R. R., has been appointed Superintendent of Motive Power of the Panama R. R. Mr. J. R. Slater, of Chattanooga, Tenn., has been appointed Superintendent of the Panama R. R.

Mr. George F. Evans, Superintendent of the Southern Division of the Boston & Maine R.R., has been appointed Assistant General Manager, with headquarters at Boston, Mass. Mr. William G. Bean, Assistant Division Superintendent, Concord, N. H., has been appointed to succeed Mr. Evans.

Mr. Samuel Hunt has been appointed General Manager of the Birmingham, Sheffield & Tennessee River Ry., with office at Sheffield, Ala., succeeding Mr. Philip Campbell, resigned. Mr. Hunt was formerly President and General Manager of the Cincinnati, Portsmouth & Virginia R. R.

Capt. Montgomery James, Civil Engineer, died at Philadelphia, Pa., Dec. 24. He was a graduate of the Lawrence Scientific School, at Harvard, and was early employed on the Hoosac Tunnel work. In later years he served in the Mexican army, and with the English troops in South Africa, being also at one time a companion of Mr. H. M. Stanley, the explorer.

Mr. H. H. Carter, who was Superintendent of the Maryland Division of the Philadelphia, Wilmington & Baltimore R. R., from 1883 to 1891, died at his home in Washington, D. C., Dec. 27. He was the first superintendent of the Maryland Division after the Philadelphia, Wilmington & Baltimore road passed under the control of the Pennsylvania R. R.

Mr. Edward S. Washburn having been elected Vice-President of the Kansas City, Fort Scott & Memphis R. R., and the Kansas City, Memphis & Birmingham R. R. Co., the office of Freight Traffic Manager has been abolished. The Vice-President will have charge of all traffic matters of the above and associated companies, and will have headquarters at Kansas City, Mo.

Mr. P. H. Schreiber has been appointed Master Mechanic of the Chattanooga Division of the Cincinnati, New Orleans & Texas Pacific Ry., with headquarters at Chattanooga, Tenn. He has been Master Mechanic of the Second District for six years, and his jurisdiction now includes also the First District and the shops at Somerset, Ky., formerly in charge of Mr. I. W. Fowle, who has resigned.

Lieut.-Col. W. H. H. Benyaurd, U. S. Engineer Corps, will succeed Major Thomas H. Handbury as chief of engineers in charge of river and harbor improvements in the Florida district, with headquarters at Jacksonville, Fla. Major Handbury has been appointed on the Mississippi River Commission, with headquarters at St. Louis, Mo., and his district embraces the Missouri for the entire length, and the Mississippi from the Ohio to Port Eads.

Major James C. Post, Corps of Engineers, U. S. A., died in New York on Jan. 6. He was born in New York city and graduated from West Point, June 23, 1865, as second lieutenant of artillery, but was transferred to the corps of engineers in 1866. He was made a captain in 1871, and major in 1886. His engineering service commenced on the improvement of Boston harbor. He was assistant professor of mathematics at West Point between 1867 and 1871, and was later in charge of river improvements in West Virginia and Kentucky, and on the Wabash and White rivers. He was assistant to the chief of engineers in 1887-1889, and after that was military attache to the U. S. Legation in London.

Mr. Russell Wadsworth Hildreth, Jun. Am. Soc. C. E., of the firm of R. W. Hildreth & Co., Civil and Inspecting Engineers, New York, died at his home in New York city on Dec. 23, 1895, of heart failure, as a result of an attack of typhoid fever. He was born in New York city, Feb. 12, 1865, and graduated from the School of Mines, Columbia College, in 1885. He at once entered the office of Mr. George S. Morison, M. Am. Soc. C. E., as draftsman, and was inspector of shop work of his large bridge structures at Nebraska City, Sioux City, Omaha and Cairo besides less important structures, and also assistant engineer on the Omaha bridge. In 1887 he formed the inspecting and civil engineering firm of Hildreth & Nettleton, with Mr. William A. Nettleton, now Master Mechanic of the Kansas City, Fort Scott & Memphis R. R., which in 1889, owing to the illness and retirement of Mr. Nettleton, became R. W. Hildreth & Co., with Mr. P. S. Hildreth as partner. He was a member of the American Society of Mechanical Engineers and the American Institute of Mining Engineers. At the time of his death he was a member of the committee in charge of revising that portion of the Building Laws relating to steel framed building construction in New York city.

ENGINEERING SOCIETIES.

COMING TECHNICAL MEETINGS.

ENGINEERING ASSOCIATION OF THE SOUTH.
Jan. 9. Secy., Lucius P. Brown, Nashville, Tenn.
CENTRAL RAILWAY CLUB.
Jan. 10. "Safe-Ending of Boiler Tubes," and "Injury Done by Drippings from Refrigerator Cars." Secy., H. D. Vougan, "Courier" Office, Buffalo, N.Y.
MONTANA SOCIETY OF CIVIL ENGINEERS.
Jan. 11. Secy., Forrest J. Smith, Deaver Block, Helena.
INDIANAPOLIS ENGINEERING CLUB.
Jan. 11. Secy., C. C. Brown.
ENGINEERS' CLUB OF KANSAS CITY.
Jan. 13. Secy., F. W. Tuttle, Baird Bldg.
WISCONSIN POLYTECHNIC SOCIETY.
Jan. 14. Secy., W. K. Means, Loan & Trust Bldg., Milwaukee.
CIVIL ENGINEERS' CLUB OF CLEVELAND.
Jan. 14. Secy., F. A. Colburn, Case Library Bldg.
DENVER SOCIETY OF CIVIL ENGINEERS.
Jan. 14. Secy., H. Breen, 36 Jacobson Block.
NORTHWEST RAILWAY CLUB.
Jan. 14. Secy., G. A. Seley, 89 Metropolitan Block, St. Paul, Minn.
NORTHWESTERN SOCIETY OF ENGINEERS.
Jan. 14. Secy., D. W. Morris, Burke Bldg., Seattle, Wash.
ENGINEERS' CLUB OF ST. LOUIS.
Jan. 15. Secy., W. H. Bryan, Turner Block.
ENGINEERS AND ARCHITECTS' ASSOCIATION OF SOUTHERN CALIFORNIA.
Jan. 15. Secy., F. Van Vleck, Los Angeles, Cal.
ASSOCIATION OF ENGINEERS OF VIRGINIA.
Jan. 15. Secy., J. A. Pilcher, Roanoke, Va.
BOSTON SOCIETY OF CIVIL ENGINEERS.
Jan. 15. Secy., S. E. Tinkham, City Hall.
AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS.
Jan. 15. Secy., R. W. Pope, 26 Cortlandt St., New York.
IOWA SOCIETY OF CIVIL ENGINEERS AND SURVEYORS.
Jan. 15. Annual meeting at Des Moines, Ia. Secy., Seth Dean, Glenwood, Ia.
AMERICAN SOCIETY OF CIVIL ENGINEERS.
Jan. 15, 16. Annual meeting. Secy., C. W. Hunt, 127 E. 23rd St., New York.
NEW YORK RAILROAD CLUB.
Jan. 16. Secy., W. G. Wattson, West Shore R. R. Weehawken, N. J.
SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.
Jan. 16. Secy., F. A. Charpiot, Macon, Ga.
CANADIAN SOCIETY OF CIVIL ENGINEERS.
Jan. 16. Secy. C. H. McLeod, Montreal.
ENGINEERS CLUB OF CINCINNATI.
Jan. 16. Secy., J. F. Wilson, Oddfellows Temple.
ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA.
Jan. 16. Secy., Daniel Carhart, Pittsburg, Pa.
ENGINEERS' CLUB OF COLUMBUS, O.
Jan. 18. Secy., David Buel.
ENGINEERS' CLUB OF PHILADELPHIA.
Jan. 18. Secy., L. F. Rondinella, 1122 Girard St.
ENGINEERS' CLUB OF MINNEAPOLIS
Jan. 20. Secy., E. Nexon, Kasota Block.
WESTERN RAILWAY CLUB.
Jan. 21. Secy., W. D. Crossman, Owings Bldg., Chicago.
COLUMBIAN ENGINEERING SOCIETY.
Jan. 21. Secy., W. F. Hart, University Bldg., 15th and H Sts., N. W., Washington, D. C.
ENGINEERING SOCIETY OF WESTERN NEW YORK.
Feb. 3. Secy., Geo. R. Sikes, 122 Pearl St., Buffalo, N.Y.
CIVIL ENGINEERS' SOCIETY OF ST. PAUL.
Feb. 3. Secy., G. L. Annan, City Engineers' Office.
WESTERN SOCIETY OF ENGINEERS.
Feb. 5. Secy., Charles J. Roney, Monadnock Block, Chicago.
TECHNICAL SOCIETY OF THE PACIFIC COAST.
Feb. 7. Secy., O. H. Von Geldern, 819 Market St., Francisco.
NEW ENGLAND RAILROAD CLUB.
Feb. 12. Secy., F. M. Curtis, P. O. Box 1576, Boston, Mass.
ENGINEERS AND ARCHITECTS' CLUB OF LOUISVILLE.
Feb. 13. Secy., Jas. K. Zollinger, Norton Bldg.
ASSOCIATION OF ONTARIO LAND SURVEYORS.
Feb. 25. Annual meeting at Toronto. Secy., A. J. Van Nostrand, Toronto, Ont.
NORTHWESTERN TRACK AND BRIDGE ASSOCIATION.
March 13. Secy., D. W. Meeker, St. Paul, Minn.

WESTERN FOUNDRYMEN'S ASSOCIATION.—The next meeting of the association will be held at the Great Northern Hotel Jan. 15, 1896. The time of the meeting will be devoted to a topical discussion of various subjects pertaining to foundry practice.

ENGINEERS' CLUB OF CINCINNATI.—At the annual meeting, on Dec. 19, officers were elected as follows: Pres., M. D. Burke; Vice-Pres., Charles E. Lindsay; Directors, Samuel Whinery, Geo. W. Kittredge and H. M. Lane; Secy., J. Frank Wilson.

ENGINEERS' CLUB, OF PHILADELPHIA.—At the meeting on Dec. 21, Mr. Harrison Sander read a paper upon the "Mines and Plant of the El Carmen Mining Co., Villadama, Mexico." Mr. Allen J. Fuller described and illustrated a late break in a 48-in. water main in Philadelphia, and Mr. Herman S. Hering illustrated the difference in the horse power necessary to operate trolley cars, run on regular time intervals and run so as to accommodate varying travel at different parts of the day. He favors the latter system as being more economical of power.

AMERICAN MASTER MECHANICS ASSOCIATION AND MASTER CAR-BUILDERS' ASSOCIATION.—The next convention of these associations will be held at Congress Hall, Saratoga Springs, N. Y., June 17 to 24.